SONY

3-754-925-13 (1)

CDW-900E

CD Recording Unit

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Mode d'emploi ——— *page 23*
Bedienungsanleitung —— *Seite 45*

Owner's Record

The model and serial numbers are located on the rear panel. Record these numbers in the space provided below and refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

Safety Regulations

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

WARNING -- For the customers in U.S.A.

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

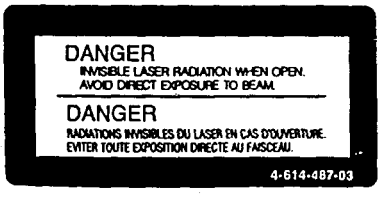
For the customers in Canada

This apparatus complies with the Class A limits for radio noise emissions set out in Radio Interference Regulations.

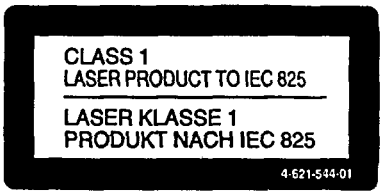
CAUTION

As the laser beam in this CDW-900E is harmful to the eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.

The use of optical instruments with this product will increase eye hazard.



This label is located on the top and side of the enclosure and of the internal chassis.



This recording unit is classified as a CLASS 1 LASER PRODUCT. The CLASS 1 LASER PRODUCT label is located on the rear panel.

NOTICE

This notice is applicable for USA and Canada only.

If shipped to USA, use the UL Listed power cord specified below.
If shipped to Canada, use the CSA CERTIFIED power cord specified below.

Do not use any other power cord.

Plug Cap	Parallel blade with ground pin. (NEMA 5-15P Configuration)
Cord	Type SVT or SJT, three 16 or 18 AWG wires.
Length	Maximum 15 feet
Rating	Minimum 10A, 125V

In the countries other than USA and Canada, use the power cord set approved by the appropriate testing organization for the specific countries where this unit is to be used.

This unit uses CD-ROM discs with the following mark.

When you use this unit as a CD player, use compact discs with the following mark.

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Introduction

How to Use This Guide

This guide is provided for users who install and operate the CDW-900E CD (Compact Disc) recording unit.
This guide describes the following:

- Introduction
- Getting Started
- Using the Unit
- Precautions
- Specifications

For control by software from the host computer, refer to the SCSI Protocol Manual.

Features

The CDW-900E CD Recording Unit is a device for accepting information from a host computer and writing it to a CD-WO (Compact Disc - Write Once) disc. The internal encoder converts the data from the host computer to the appropriate CD-ROM, CD-ROM XA, CD-I or audio format, and then the writer block writes this data on the CD-WO disc.

A CD written by this unit complies in all respects with the Red Book, Yellow Book and Green Book standards, and may therefore be used with any current commercially available CD player, CD-ROM drive or CD-I player.

Summary of features

- Uses a SCSI bus (ANSI SCSI X3.131-1986).
- Supports CD-ROM, CD-ROM XA, CD-I and audio formats.
- Real time mode and double-speed writing mode.
- Sync/Header/EDC/ECC/CIRC/Scrambling and Subcode data is subject to conversion.
- The data then undergoes EFM (Eight to Fourteen Modulation) for writing to the disc, and the resulting signal is also provided as an output.
- Up to sixteen CDW-900E or CDW-W1 CD Recording Units may be connected and controlled together.

Recordable Discs

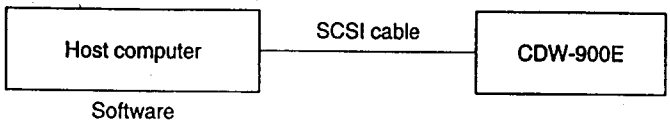
The CDW-900E CD Recording Unit can record on any CD-WO disc which complies with the Orange Book standard.

System Configuration

A complete recording system requires the following components:

- Host computer, equipped with SCSI interface, or fitted with SCSI host adaptor
- CDW-900E CD Recording Unit
- SCSI cable
- Software

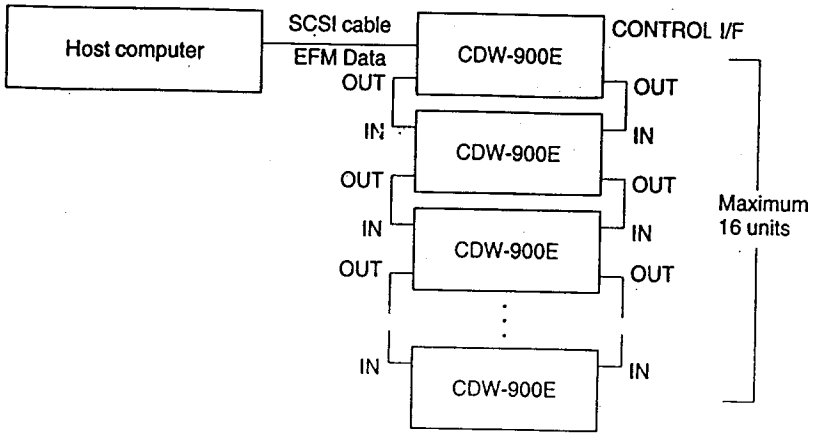
The basic configuration is as follows:



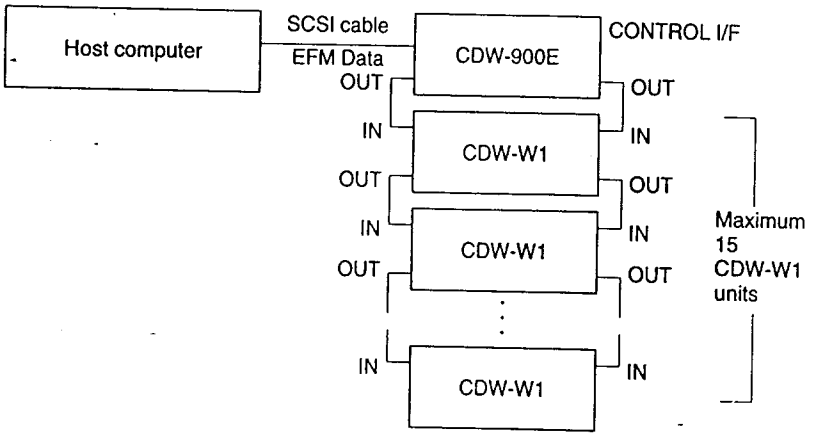
If required, you can also use the unit in combination with other SCSI devices, CDW-W1 units, or other CDW-900E units.

■ Example configurations

Using a number of CDW-900E units



In combination with existing CDW-W1 units



Location and Function of Parts

■ Front panel

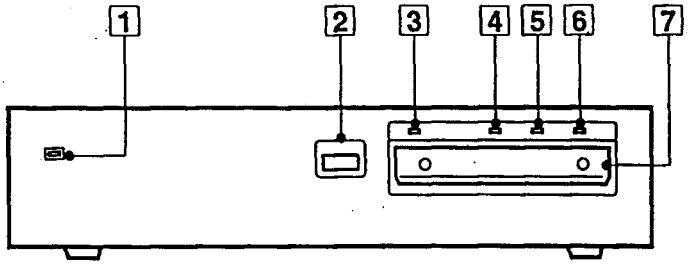


Figure 1. Front Panel

1 **POWER indicator**
Lights green when the unit is powered on.

2 **OPEN/CLOSE button**
Press to open/close the disc tray in order to insert or remove a disc. While the unit is writing or reading, this button does not function unless held down continuously for several seconds, to prevent inadvertent operation.
If inhibited by a command from the host computer, this button does not function at all.

3 **DISC indicator**
This has three states, as follows.
Off: There is no disc loaded, or the disc tray is open.
Flashing: The disc tray is opening or closing, or the unit is determining the disc type.
On: There is a disc loaded.

4 **READ indicator**
This shows the following two states.
Flashing: A playback command is being processed.
On: Playback is in progress.

5 **WRITE indicator**

This shows the following three states.
Rapid flashing: Preparation for writing data.
On: Writing data.
Slow flashing: The disc may not be recorded with the correct power. Play back the disc to check.

6 **× 2 SPEED indicator**

Lights when writing in double-speed writing mode.

7 **Disc tray**

The disc loads in this tray. Press the OPEN/CLOSE button to open or close this tray in order to insert or remove a disc.

■ Rear panel

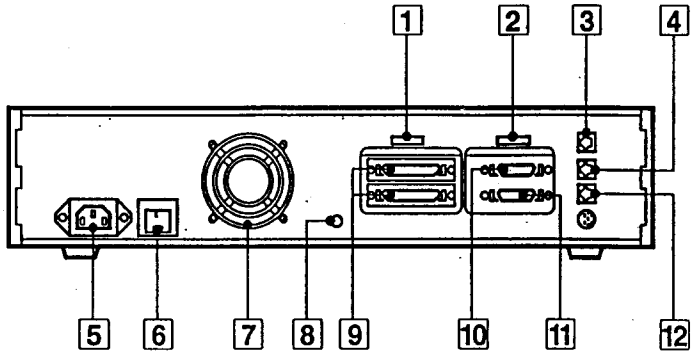


Figure 2. Rear Panel

[1] **Encoder DIP switches**
Set the SCSI ID for this unit, and the encoder functions. See page 12 for details.

[2] **Writer DIP switches**
Set the writer ID and the functions of the writer block. See page 14 for details.

[3] **DATA OUT connector**
When daisy-chaining to other CDW-900E or CDW-W1 units for simultaneous data writing, this outputs the EFM data to the next unit.

[4] **DATA IN connector**
When daisy-chained to other CDW-900E or CDW-W1 units for simultaneous data writing, this inputs the EFM data from the previous unit.

[5] **AC IN connector**
Connect the AC power cord (not supplied).

[6] **POWER switch**
Press the top of the switch to power on.
Press the bottom of the switch to power off.

[7] **Fan**
This provides the necessary cooling for the interior of the unit. Ensure that nothing blocks the supply of air to the fan inlet.

8 **GND terminal**
Frame ground. When using a number of units together, connect the GND terminals together.

9 **INTERFACE CONNECTOR (SCSI)**
Connect to the host computer using the supplied SCSI cable. The other connector can be used for a daisy-chain connection to another SCSI device (hard disk drive, CR-ROM drive, etc.). If no other device is connected, be sure to fit the supplied SCSI terminator.

10 **CONTROL I/F OUT connector**
When daisy-chaining to other CDW-900E or CDW-W1 units for simultaneous data writing, this outputs the control signals (START, STOP etc.) to the next unit.

11 **CONTROL I/F IN connector**
When daisy-chained to other CDW-900E or CDW-W1 units for simultaneous data writing, this inputs the control signals (START, STOP etc.) from the previous unit.

12 **DIGITAL OUT connector**
When playing back a disc, this outputs a signal of digital audio interface type 2, form 1 format.

Getting Started

DIP Switch Settings

■ Encoder settings

The encoder DIP switches set the SCSI ID and the internal encoder functions.
The figure below shows the default settings.
Always power off the unit before changing DIP switch settings.

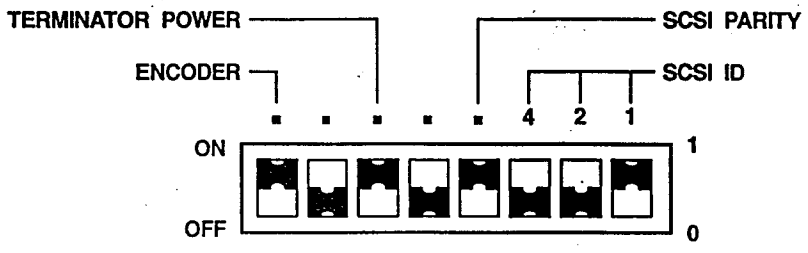


Figure 3. Encorder Settings

Encoder functions

Switch	ON	OFF
ENCODER	Use the encoder in this unit.	Accept data from an external encoder and write directly to disc.
TERMINATOR POWER	Supply SCSI terminator power to other device.	Do not supply SCSI terminator power to other device.
SCSI PARITY	Parity check on data transmission	No parity check on data transmission

ON: up OFF: down

default setting

SCSI ID setting

SCSI ID	SCSI ID switches		
	3	2	1
0	0	0	0
1	0	0	1
2	0	1	0
3	0	1	1
4	1	0	0
5	1	0	1
6	1	1	0
7	1	1	1

1: up 0: down

default setting

Notes

- The SCSI ID must not clash with that of other devices on the same connection, or the unit will not function correctly.
- Switches not specified above may be set to either up or down.

■ Writer settings

The writer DIP switches set the writer ID address and the functions of the writer block.
The figure below shows the default settings.
Always power off the unit before changing DIP switch settings.

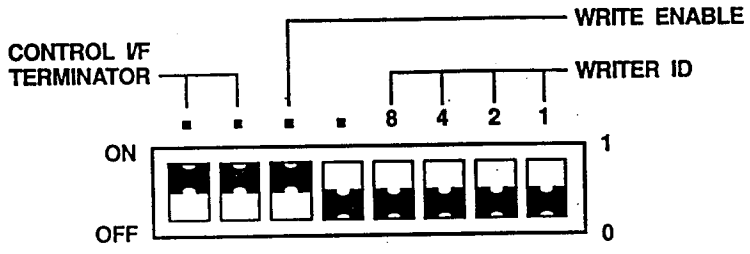


Figure 4. Writer Settings

Writer functions

Switch	ON	OFF
CONTROL I/F TERMINATOR	When there is no CDW-900E connected for simultaneous data writing or the drive is the last device in a daisy chain, these two switches must both be in the ON position.	When a number of CDW-900E units are connected in a daisy chain for simultaneous data writing and the drive is not the last device in the chain, both switches must be in the OFF position.
WRITE ENABLE	Data writing enabled.	Data writing inhibited.

ON: up OFF: down

default setting

Writer ID setting

Writer ID	WRITER ID switches			
	8	4	2	1
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
⋮	⋮	⋮	⋮	⋮
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

1: up 0: down

default setting

Notes

- When a number of CDW-900E or CDW-W1 units are connected together, the writer IDs must all be different. If there is a clash, the unit will not function correctly.
- Switches which are not listed above may be set to either up or down.

Connections

Always ensure that the unit is powered off before making any connections to the rear panel.

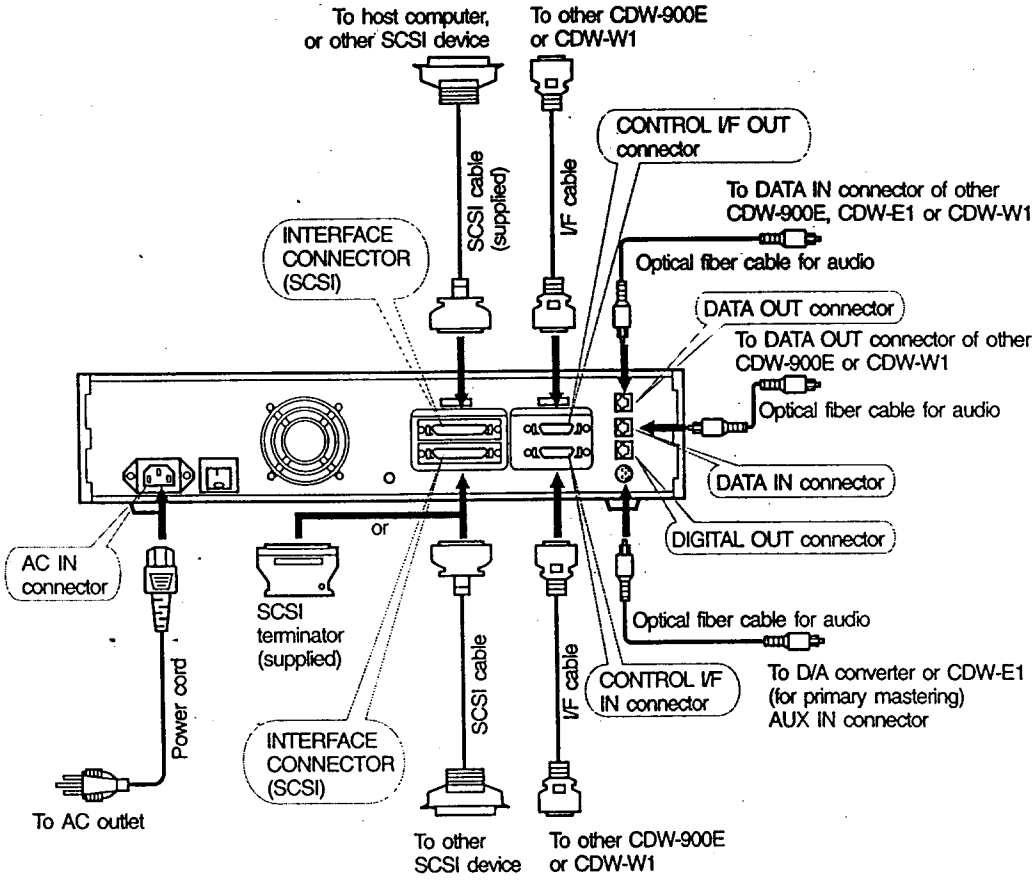

To host computer, or other SCSI device
To other CDW-900E or CDW-W1
CONTROL I/F OUT connector
To DATA IN connector of other CDW-900E, CDW-E1 or CDW-W1
SCSI cable (supplied)
I/F cable
INTERFACE CONNECTOR (SCSI)
Optical fiber cable for audio
DATA OUT connector
To DATA OUT connector of other CDW-900E or CDW-W1
Optical fiber cable for audio
DATA IN connector
DIGITAL OUT connector
or
AC IN connector
SCSI terminator (supplied)
Optical fiber cable for audio
To D/A converter or CDW-E1 (for primary mastering) AUX IN connector
CONTROL I/F IN connector
SCSI cable
I/F cable
Power cord
INTERFACE CONNECTOR (SCSI)
To AC outlet
To other SCSI device
To other CDW-900E or CDW-W1

Figure 5. Connections

Notes

- If this unit is the last device in a daisy-chain for simultaneous data writing, set the TERMINATOR switches (writer DIP switches) to the ON position.

Using the Unit

This section describes the entire basic recording operation, from loading to unloading the disc.

Starting the Unit

1 Power on the CDW-900E unit, and any other recording equipment connected.

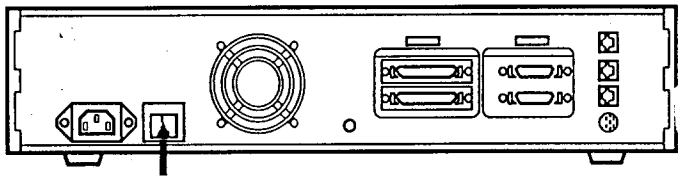


Figure 6. Turning on the unit

2 Power on the host computer and other SCSI devices.

3 Press the OPEN/CLOSE button to open the disc tray.

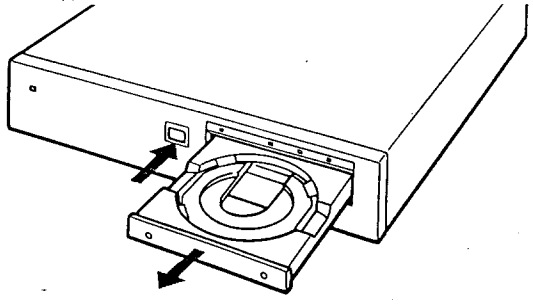


Figure 7. Opening the disc tray

4 Place the disc on the tray with the recording (green) side down.

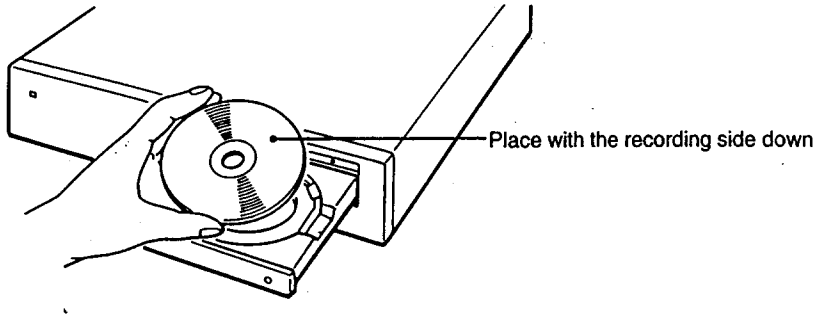


Figure 8. Inserting the disc

5 Press the OPEN/CLOSE button to close the tray.
The DISC indicator flashes for 10 to 20 seconds, then lights continuously. Next the READ indicator flashes for 10 to 20 seconds, then goes off.

6 Use commands from the host computer to carry out the writing to the disc, and playback if necessary.
For details of the commands, see the SCSI Protocol Manual.

When a write command is issued, the WRITE indicator flashes, then a few seconds later lights continuously.
When a read command is issued, the READ indicator flashes, then a few seconds later lights continuously.
In double-speed writing mode, the ×2 SPEED indicator lights.

Removing the Disc

When writing or reading is completed, press the OPEN/CLOSE button to open the disc tray. After removing the disc, always press the OPEN/CLOSE button again to close the tray.

Note
Pressing the OPEN/CLOSE button while writing to the disc results in an error, and the disc may be unusable as a result.

Precautions

Recording Unit

■ Safety

Power supply

- Use the unit with a 100 to 120 V AC power supply in the U.S.A. and Canada, and 220 to 240 V AC in Europe.
- Do not connect the unit to the same outlet as high consumption equipment such as shredders and copiers.

Power cord

- Do not place or drop heavy objects on the power cord, or damage it in any way. It is dangerous to use the unit with a damaged power cord.
- When disconnecting the power cord from the AC outlet, hold the plug and not the cord. Pulling the cord may damage it.
- If not using the unit for a long period, disconnect from the AC outlet.

■ Preventing failures

Do not subject the unit to shock or vibration.
If the unit is dropped or subjected to a violent shock it may cease to function.

Use the unit in a level position.
This unit is designed to be used in a horizontal position. Do not use it in a vertical or inclined orientation.

Installation location
Do not use or store the unit in a location subject to:

- High humidity
- Excessive dust
- High temperatures
- Mechanical vibration
- Direct sunlight
- Extreme changes of temperature

Condensation
If moved from a cold place to a warm place, or if the ambient temperature rises suddenly, the unit may be subject to condensation. After a change of temperature, do not use the unit immediately; leave it to acclimatize for at least an hour. Attempting to use the unit while condensation is present may result in damage to the unit or to the disc. If there is any possibility of condensation, remove the disc immediately.
Leaving the unit powered on, with no disc loaded, will clear condensation quickly.

Moving the Unit
If not using the unit, always remove the disc. Do not move the unit with a disc in place. While the unit is operating, the disc rotates at a high speed. Moving the unit while operating may result in unstable operation, or possibly damage to the disc.

Cleaning
If the cabinet is dirty, wipe clean with a dry soft cloth. If the unit is very grimy, use a cloth moistened with a mild detergent solution, then wipe with a dry cloth. Do not use solvents such as alcohol or benzine, as these may damage the finish or remove indication lettering.

In the event of problems
If the unit should malfunction, disconnect it from the AC outlet, and contact your dealer or an authorized Sony dealer.

Discs

- Handle discs without touching the recording surface (green).
- Do not write on the discs or attach any labels.

■ Storage

- Avoid storing the discs in a location subject to:
  - Direct sunlight
  - High humidity
  - Particularly in summer, in a car or any other place where the temperature may rise excessively.
- Always store discs in their storage cases. Piling them up or stacking them at an angle when not in their cases can lead to deformation or scratching.

■ Care of discs

Sony CDM-1K/2K cleaning kit is recommended.

- Before playing a disc, wipe any dust or fingerprints from the recording surface with the cleaning cloth (not supplied).
- Organic solvents, including cleaners and anti-static preparations intended for vinyl records can damage CDs, and should be avoided.
- Wipe the disc lightly with a soft cloth, always in the radial direction, from the center of the disc outwards.

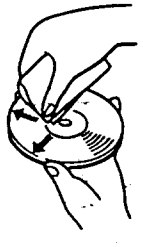


Figure 9. Cleaning discs

- If a disc is badly soiled, use a soft cloth soaked in water and wrung out well to wipe the marks from the surface. Then use a soft dry cloth to remove remaining moisture.

Specifications

Discs

Writable discs (complying with the Orange Book specification)	
Diameter	12 cm or 8 cm
Disc speed	1.2 m/s to 1.4 m/s

Interface connectors

CONTROL I/F connectors	36-pin, half pitch ribbon-type connectors (×2)
INTERFACE connectors	50-pin, SCSI 2-type connectors (×2)
DATA IN connector	Optical fiber connector
DATA OUT connector	Optical fiber connector
DIGITAL OUT connector	Optical fiber connector

Environmental conditions

Operating	
Temperature	10 to 35 °C (50 to 95 °F)
Humidity	15 to 90 % R.H.
Storage	
Temperature	–30 to 55 °C (–22 to 131 °F)
Humidity	15 to 90 % R.H.

General

Supply voltage	
U.S.A. and Canada	100 to 120 V AC, 50/60 Hz
Europe	220 to 240 V AC, 50/60 Hz
Current consumption	
U.S.A. and Canada	0.5 A
Europe	0.3 A
Weight	7.5 kg (16.5 lb)
Dimensions	424 × 88 × 420 mm (W/H/D) (16.7" × 3.5" × 16.5")
Supplied accessories	SCSI cable (1) SCSI terminator (1)

Design and specifications are subject to change without notice.